

## CLAIMS

### What is claimed is:

1. A safety syringe and cap holding device comprising:

a syringe having a body portion and a needle assembly interconnected with the body portion, the needle assembly including a needle and a hub;

a cover removably attached to the hub and covering the needle;

a housing having a receptacle for receiving the cover; and

means in the housing for disengaging the cover from the hub to allow the syringe and needle assembly to be withdrawn from the housing for use while the cover remains in the housing.

2. The apparatus of claim 1, wherein the hub comprises at least one recess disposed annularly about the hub.

3. The apparatus of claim 2, wherein the cover comprises at least one protrusion for engagement with the at least one recess of the hub.

4. The apparatus of claim 3, wherein the means for disengaging the cover comprises a linkage system in the housing for moving the at least one protrusion out of engagement with the at least one recess for disengaging the cover from the hub.

5. The apparatus of claim 4, wherein the linkage system comprises one or more hooks for engaging one or more handles on the cover for disengaging the at least one protrusion away from the at least one recess to disengage the cover from the hub.

6. The apparatus of claim 4, wherein the linkage system is actuated remotely from the housing.

7. The apparatus of claim 3, wherein the means for disengaging the cover comprises one or more solenoids in the housing for moving one or more hooks for engaging one or more handles on the cover for disengaging the at least one protrusion from the at least one recess to disengage the cover from the hub.

8. The apparatus of claim 7, wherein the plurality of solenoids are actuated remotely from the housing.

9. The apparatus of claim 1, further comprising means in the housing for selectively retaining or releasing the cover from engagement within the housing.

10. The apparatus of claim 9, wherein the means for selectively retaining or releasing the cover comprises a linkage system in the housing for engaging and disengaging a tip of the cap.

11. The apparatus of claim 9, wherein the means for selectively retaining or releasing the cover comprises one or more solenoids having one or more hooks for engaging and disengaging the cap in the holder.

12. The apparatus of claim 9 wherein the housing comprises a weighted base.

13. A method of using a syringe comprising:

providing a needle assembly including a hub, a needle, and a cover interconnected with the hub and covering the needle;

engaging the needle assembly with a syringe body;

inserting the needle assembly into a housing;

activating a device within the housing to permit the needle to be withdrawn from the cover; and

using the syringe.

14. The method of claim 13, further comprising reinserting the syringe body and needle into the cover in the housing and actuating the device to remove the syringe body, needle assembly, and cover from the holder.

15. The method of claim 13 wherein the step of activating the device comprises actuating a switch remote from the needle.

16. The method of claim 15, wherein the step of activating the device comprises depressing a foot switch.

17. The method of claim 13, further comprising retaining the cover to remain in the housing when the syringe is being used.